

CLAIMS

1. A switching power supply unit, wherein
a plurality of capacitors connected in series with each
5 other are connected with input terminals of a plurality of
switching power supplies each having a switching element, a
transformer and a rectifier, so that voltages of the plurality
of capacitors are inputted to the plurality of switching power
supplies, and that voltages developed in the plurality of
10 switching power supplies are outputted together to a common
output terminal, and the transformer is composed of windings
made up of a stack of planar conductor coils.
2. The switching power supply unit according to claim 1,
15 wherein
the windings as the transformer are formed of copper foil
patterns stacked on a multilayer printed board.
3. The switching power supply unit according to claim 2,
20 wherein
the copper foil patterns are formed one turn per layer
of the multilayer printed board, and the copper foil patterns
on the multilayer printed board are interconnected by a
connection unit.

4. The switching power supply unit according to claim 3,
wherein

the connection unit is formed outside the copper foil
patterns.

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5. The switching power supply unit according to claim 1,
wherein

the switching power supplies are half-bridge converters.

10 6. The switching power supply unit according to claim 1,
wherein

the switching elements of the plurality of switching
power supplies are switched on and off at regular intervals.

15 7. An electronic device for supplying electric power to a
semiconductor device by using the switching power supply unit
according to any one of claims 1 to 6.